

Figure 2. Inconsistencies between HCPs intended management practices and AASLD guidelines.

Figure 2. Inconsistencies between HCPs intended management practices and AASLD guidelines.

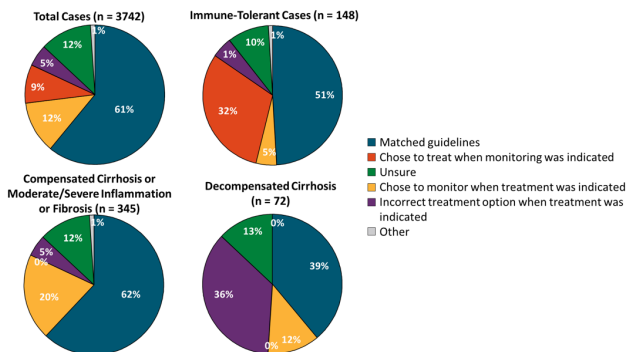


Figure 2. Comparison of the intended management approach (prior to seeing guideline recommendation) with the approach recommended by the guideline for cases in which a recommendation was reached. A response of "Unsure" or "Other" was considered inconsistent with guideline recommendation.

Conclusion. This tool highlights important knowledge gaps in information needed to make appropriate HBV management decisions, particularly in the setting of cirrhosis. It also demonstrates differences between HCPs' approaches and the AASLD guideline recommendations. Of cases in which the HCPs' intention were inconsistent with guidelines, 52.1% indicated that they planned to change their approach after being provided the recommendation by the tool (Fig 3).

Figure 3. HCPs intent to change management practice after seeing guideline recommendation.

Figure 3. HCPs intent to change management practice after seeing guideline recommendation.

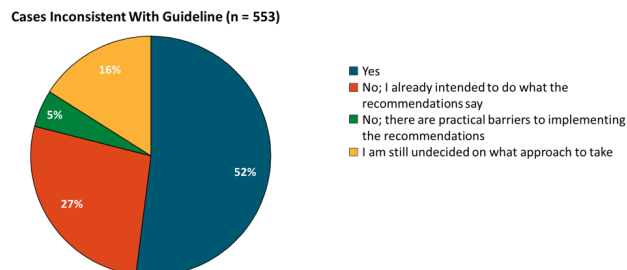


Figure 3. Responses to the question, "Did the recommendations change your management choice?" A response was not provided for all cases. Only cases in which the original management choice selected did not match guidelines are shown.

Disclosures. Jenny Schulz, PhD, Eiger Biopharmaceuticals (Other Financial or Material Support, Editorial support) Paul Kwo, MD, Abbvie (Advisor or Review Panel member) Alios (Advisor or Review Panel member) Assembly Biosciences (Research Grant or Support) Eiger (Research Grant or Support) Gilead Sciences (Advisor or Review Panel member) Janssen (Other Financial or Material Support, Data and Safety Monitoring Board)

1132. Professional Development Curriculum for Fellows in Infectious Diseases

Jessica B. Wells, MD¹; Vera Luther, MD²; ¹Wake Forest School of Medicine, Winston Salem, North Carolina; ²Wake Forest Baptist Health System, Winston Salem, North Carolina

Session: P-50. Infectious Diseases Medical Education

Background. ID fellowship training demands that fellows must learn a wealth of information to master ID content and become experts in the field. As such, there is often a limited amount of formal curricular time devoted to career development and to the business of medicine. We designed and implemented a professional development educational series for ID fellows.

Table. Professional Development Curriculum Content Overview	
Title	Format
Careers in ID Part 1	Lecture with Q & A
Careers in ID Part 2	Small group discussion
Physician Contracts	Guest speaker with Q & A
Compensation Models	Small group discussion
Job Search Elements Part 1	Small group discussion
Job Search Elements Part 2	Guest speaker with Q & A

Methods. Surveys of fellowship graduates indicated an increased need for training on the business aspects of medicine and careers in ID during fellowship. The primary aim of this project was to develop a professional development curriculum to meet identified needs while still being feasible to implement given all the other topic areas about which fellows must learn. We developed a 6-part series comprised of: careers in ID, physician contracts, compensation models, and job search (table). Each of the 6 educational activities included pre-reading and a 1-hour small group activity. Outside speakers were utilized in 2 of the sessions. Fellows completed surveys pre- and post-curriculum implementation and also provided formative assessments of curricular activities throughout the year.

Results. All (n=6) ID fellows completed the curriculum. All 6 (100%) reported an increased understanding of careers in ID, physician contracts, and resources for continued learning on career paths. All fellows reported that this was a meaningful addition to the existing curriculum. Strengths of the curriculum as identified by fellows were the general topic areas and the interactive format. Fellows identified areas for improvement for upcoming years: expand the session on compensation models, include more information on careers in industry, and add billing and coding workshops. All fellows strongly agreed that the professional development curriculum should be continued in future years.

Conclusion. The professional development curriculum was a valuable addition to our existing ID fellowship training program. Implementing a professional development curriculum for ID fellows is feasible.

Disclosures. All Authors: No reported disclosures

1133. Qualitative Analysis of Pharmacists' Therapeutic Reasoning Processes Applied to Antimicrobial Selection and Stewardship Activities

Katherine Gruenberg, PharmD¹; Emily Abdoler, MD, MAEd²; Bridget C. O'Brien, PhD³; Brian Schwartz, MD³; Conan MacDougall, PharmD, MAS⁴; ¹UCSF School of Pharmacy, San Francisco, CA; ²University of Michigan, Ann Arbor, Michigan; ³University of California, San Francisco, San Rafael, California; ⁴University of California San Francisco School of Pharmacy, San Francisco, CA

Session: P-50. Infectious Diseases Medical Education

Background. Relative to the study of diagnostic reasoning, less is known about how clinicians make therapeutic decisions. Past work has explored how physicians choose particular antimicrobials in specific cases (antimicrobial therapeutic reasoning - ATR), but how pharmacists make similar determinations has remained unexplored. Understanding ATR by pharmacists could inform pharmacist education and improve antimicrobial stewardship (AS).

Methods. We conducted individual interviews with a purposeful sample of 11 pharmacists (5 ID specialist pharmacists and 6 non-specialists), adapting a protocol for semi-structured interviews utilizing clinical vignettes based on a prior study in physicians. In addition, participants were asked to describe their ATR process generally using a novel notecard exercise. Interviews were transcribed and analyzed with Dedoose, using the prior study's codebook as an initial framework and adding and adapting codes through an iterative process.

Results. We found that pharmacists generally engage in the same major ATR steps (Naming the Syndrome, Delineating Pathogens, Selecting the Antimicrobial) previously described in physicians (Figure 1). Pharmacists also seemed to incorporate similar patient- and system-factors and to utilize "therapy scripts". However, specific factors and therapy script categories did not overlap completely, with some new factors and nuances emerging (Table 1). Overall, the antimicrobial reasoning framework described for physicians encompassed pharmacists' AR, but some pharmacists described "Revisiting the Syndrome" in light of the clinical data and in some cases pharmacists appeared to filter script options (for example, due to allergies) before proceeding.

Figure 1 - Antimicrobial Therapeutic Reasoning Framework

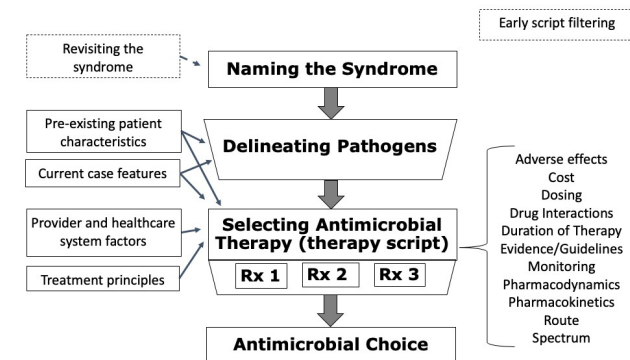


Table 1 - Factors Involved in Pharmacists' Antimicrobial Reasoning Process

Factors
Age
Allergies
Exposures
Medical history
Ability to take oral medications
Comorbidities
Past infections
Weight*
Medications
Prior exposure to antimicrobials
Current medications
Existing pill burden
Social factors
Ability to adhere**
Financial factors
Differentiating features
Microbiologic data
Illness severity
Illness trajectory
Antibiogram
Clinical experience
Institution-specific practices
Team Dynamics*
Pathogen-based treatment
Evidence-based/guideline-supported decisions**
Narrow coverage
Parsimony

*New factors as compared to those previously identified as impacting the AR process in physicians
 **Factors with expanded definitions compared to those identified in the prior physician interview study
 Factors previously identified as impacting the AR process in physicians but not identified in pharmacists: Existing Pill Burden, Likelihood of Follow-up, Patient Preferences, Supporting Trainee Choices

Conclusion. The framework describing pharmacist antimicrobial ATR and is similar to that in a prior study of physicians, with some nuances that may be attributable to the pharmacist's reviewer role in AS. Application of this framework has potential to aid in teaching learners, identifying where error or bias may occur, improving multidisciplinary AS efforts, and providing a common framework for communication.

Disclosures. All Authors: No reported disclosures

1134. Substance Use Disorder Patients' Perspectives of a Multidisciplinary Antimicrobial Infusion Service

Joy J. Juskowich, MD¹; Clinton G. Cooper, MD, PhD¹; Ruchi Bhandari, PhD, MPA, MA, MBA¹; Stephanie S. Boyd, MSN, RN-BC²; Neil Reece, BSN, RN-BC²; Melanie A. Fisher, MD, MACP, MSc¹; ¹West Virginia University, Morgantown, West Virginia ²WVU Medicine, Morgantown, West Virginia

Session: P-50. Infectious Diseases Medical Education

Background. Injection drug use is associated with infectious diseases such as endocarditis and osteomyelitis requiring prolonged intravenous (IV) antimicrobial therapy. Few programs offer simultaneous inpatient infectious disease and addiction treatment. WVU Medicine implemented a multidisciplinary Infusion Service (IS) to provide IV antimicrobial therapy while treating substance use disorder. From 2017 through 2019, IS cared for over 840 patients. The aim of this study was to evaluate IS by assessing patients' perspectives of overall experience, interactions with healthcare providers, and preparation for continued recovery from substance use.

Methods. Adults ≥ 18 and < 90 years-old with substance use disorder on IS between November 2019 and May 2020 were eligible. Demographic, substance use, and infectious diseases data were obtained by chart review. Confidential surveys with questions about overall experience, interactions with healthcare providers, and preparation for continued recovery were administered during the first week after transfer to IS and again the week of discharge.

Results. Forty-two patients completed 39 initial and 12 follow up surveys. All used injection drugs, 85.7% (36/42) used opioids and 66.7% (28/42) used methamphetamine. Endocarditis was most common infection (61.9% (26/42)), with *Staphylococcus aureus* most often isolated (59.5% (25/42)). IS experience and care for infection were excellent or good in 97.4% (38/39) initial and 100% (12/12) follow up surveys. During IS, patients did not perceive being treated differently due to substance use in 94.9% (37/39) initial and 83.3% (10/12) follow up surveys. Before IS, patients perceived being treated differently in 84.6% (33/39) initial and 100% (12/12) follow up surveys. Patients felt IS would help with continued recovery in 84.6% (33/39) initial and 100% (12/12) follow up surveys.

Conclusion. According to patients' perspectives, IS is effective in creating a positive overall healthcare experience, reducing stigma associated with substance use, and preparing patients for continued recovery after discharge. This study supports combining inpatient infectious disease and addiction therapy. Infectious diseases providers should be educated about this multidisciplinary approach.

Disclosures. All Authors: No reported disclosures

1135. The PEST Approach to Choosing Antimicrobial Therapy

Kusha Davar, MD, M.B.A., MS¹; Tara Vijayan, MD, MPH²; ¹UCLA Multicampus Fellowship, Thousand Oaks, California; ²UCLA David Geffen School of Medicine, Los Angeles, California

Session: P-50. Infectious Diseases Medical Education

Background. Selecting an empiric antimicrobial regimen can be difficult for early learners and misuse of antibiotics can lead to adverse events and antimicrobial resistance. We describe here an approach to aid internal medicine interns in their clinical

decision making, particularly when it comes to diagnosing and empirically treating infections.

Methods. The PEST model was created as a four-step approach to therapeutic reasoning and choosing an appropriate antimicrobial regimen for a given infectious disease syndrome (Figure 1).

In February 2020, we conducted two independent teaching sessions for interns on the PEST approach during noon conference. We assessed pre-and post-teaching responses to five clinical vignette-based questions to assess optimal selection of antibiotics and improvement in the use therapeutic reasoning (Figure 2). Results were presented as a percentage of interns, both pre- and post-intervention, who chose an appropriate antibiotic and a percentage of interns who provided sufficient therapeutic reasoning as defined by using at least three out of the four PEST criteria.

Figure 1 – The PEST Approach Model

P: What is the **Pathology**?

- What is the pathogen? If no culture data is available, what are the typical pathogens based on the site of infection?

E: What is the **Epidemiology**?

- What are the local resistance patterns of the pathogen? Is an antibiogram available?

S: What is the **Severity**?

- How severe is the infection? Localized infection? Disseminated infection? Hemodynamically unstable? Immunocompromised patient?

T: What is the **Treatment**?

- What is the correct dosing, keeping in mind renal function (CrCl) and location of the infection (e.g. serum vs. CSF)? Medication interactions? Oral bioavailability? Contraindications?

Figure 2 – Clinical Vignette Examples

1. A 35-year-old man is evaluated for a 1-day history of fever, chills, vomiting, diarrhea, and cough productive of green and brownish sputum. He feels short of breath with minimal activity, and his breathing appears uncomfortable. He was diagnosed with influenza A two weeks prior which he reportedly improved one week ago. Medical history is significant for asthma for which he takes albuterol and IV drug use.

On physical examination, temperature is 39.0 °C, blood pressure is 100/60 mm Hg, pulse rate is 110/min, and respiration rate is 30/min. Oxygen saturation is 92% breathing ambient air. Pulmonary examination is notable for diffusely decreased breath sounds throughout and crackles at the right lung base; the remainder of the examination is unremarkable. White blood cell count is 17,000/mm³ and creatinine is 3.5 mg/dL (baseline 0.9 mg/dL). Blood cultures taken peripherally are growing GPCs in clusters. Chest radiograph shows a right lower lobe infiltrate suggestive of consolidation pneumonia.

What antibiotic regimen would you choose? Please explain your answer in detail.

2. A 92-year-old woman is evaluated in the emergency department for fevers, chills, nausea, back pain, and dysuria. Symptom onset began 3 days prior with increased urinary frequency. She has a past medical history of atrial fibrillation and is currently taking warfarin.

On physical examination, she appears uncomfortable. Temperature is 38.6 °C, blood pressure is 110/60 mm Hg, and pulse rate is 120/min. Abdominal examination demonstrates diffuse tenderness, prominently in the suprapubic region with marked CVA tenderness. White blood cell count is 14,000/mm³ and renal function is within normal range. Blood cultures are drawn.

What antibiotic regimen would you choose? Please explain your answer in detail.

Results. Twenty-seven interns participated in the activity. At baseline, several interns had incorporated aspects of the PEST approach in their pre-teaching responses. While the teaching session improved therapeutic reasoning as defined by the PEST strategy (Figure 3), there was no appreciable difference in antibiotic selection (Figure 4). Ten interns commented on the usefulness of the approach, specifically highlighting the systematic approach to antibiotic selection.

Figure 3 – Differences in Therapeutic Reasoning After PEST Teaching

